

Apph. No. 10/034,680
Docket No. 14X200155/GEM-0194

REMARKS / ARGUMENTS

Status of Claims

Claims 1-21 are pending in the application and stand rejected. Applicant has canceled Claims 3 and 21, amended Claims 1, 4, 5, 7, 10, 12, 13, 15, 16 and 19, and added new Claim 22, leaving Claims 1, 2, 4-20 and 22 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

Objections to the Specification

The Examiner objected to the disclosure because of an informality.

Applicant has amended the specification as suggested by the Examiner to delete the objectionable language.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of this objection.

Rejections Under 35 U.S.C. §102(b)

Claims 1-4 and 17-21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Karssemeijer (U.S. Patent No. 6,035,056, hereinafter Karssemeijer).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*" *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the *** claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements

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"arranged as in the claim." Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984) (emphasis added). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Regarding Independent Claim 1

Applicant has canceled Claim 3 and has amended Claim 1 to include limitations of the same, such that Claim 1 now recites, inter alia,

"...wherein the region of interest is a rectangular region of the image of a minimum surface area to cover the body part."

As such, the limitations of Claim 3 as a whole have not been amended, but have merely been incorporated into Claim 1.

Dependent claims inherit all of the limitations of the parent claim.

In alleging anticipation of Claim 3 (the limitations of which now incorporated into Claim 1), the Examiner alleges that Karssemeijer discloses the claimed invention by referencing Karssemeijer at Figure 1A, and Column 5 lines 35-38.

Applicant respectfully disagrees that Karssemeijer discloses each and every element of the claimed invention arranged as claimed.

At Column 5 lines 35-38, Applicant finds Karssemeijer to disclose clipping of the image to form a square because a full resolution image is not necessary for the segmentation of *the pectoral muscle*.

At Figure 1A, Applicant finds Karssemeijer to disclose a digital mammogram 100 showing background 102, breast tissue 104, and pectoral muscle 106, *where background 102 appears to occupy about 40% of the total image 100*.

If the Examiner equates the clipping disclosed at Column 5 lines 35-38 with the region of interest being a rectangular region of the image *of a minimum surface area to cover the body part*, Applicant respectfully disagrees since the "clipping" of Karssemeijer includes only the segmentation of *the pectoral muscle* and does not include the a minimum surface area *to cover the body part* (more than the pectoral muscle), as claimed.

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If the Examiner equates the digital mammogram 100 disclosed at Figure 1A with the region of interest being a rectangular region of the image *of a minimum surface area to cover the body part*, Applicant respectfully disagrees since the digital mammogram 100 appears in Figure 1A to include *about 40% background 102*, which is inconsistent with the claim language "*minimum surface area to cover the body part*" (with minimal background).

In view of the foregoing, Applicant respectfully submits that as cited, Karssemeijer does not disclose each and every element of the claimed invention *arranged as claimed*.

Regarding Independent Claim 19

Applicant has amended Claim 19 to include limitations of Claim 5, such that Claim 19 now recites, inter alia,

"...an alignment block for aligning the regions of interest of at least two images by comparing a vertical dimension of the region of interest on each image, and if the vertical dimensions are identical, performing vertical alignment of an upper or lower edge of the regions of interest."

Dependent claims inherit all of the limitations of the parent claim.

In view of Karssemeijer not being applied to Claim 5 for purposes of anticipation, Applicant submits that for at least the same reasons Karssemeijer cannot be applied to amended Claim 19 for purposes of anticipation.

In view of the amendment and foregoing remarks, Applicant submits that the Karssemeijer does not disclose all of the claimed elements arranged as in the claim, and absent anticipatory disclosure in Karssemeijer of each and every element of the claimed invention arranged as in the claim, Karssemeijer cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §102(b) have been traversed, and requests that the Examiner reconsider and withdraw of these rejections.

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Rejections Under 35 U.S.C. §103(a)

Claims 5-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Karssemeijer in view of Carrott et al. (U.S. Patent No. 6,396,940, hereinafter Carrott).

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

Regarding Now Independent Claim 5

Applicant has rewritten Claim 5 in independent form, which recites, *inter alia*,
“... comparing a *vertical dimension of the region of interest on each image*, and if the vertical dimensions are identical, *performing vertical alignment* of an upper or lower edge of the regions of interest.”

The limitations of Claim 5 as a whole have not been amended, but have merely been rewritten in independent form.

Dependent claims inherit all of the limitations of the parent claim.

In alleging anticipation of Claim 5, the Examiner acknowledges that Karssemeijer does not suggest using an alignment method and looks to Carrott to cure this deficiency. Paper 05112005, page 9.

In applying Carrott to cure the deficiency of Karssemeijer, the Examiner references Carrott at Column 8 lines 25-26 and lines 40-43, and Figure 4a numeral 90, and further remarks that “based with this knowledge, if the vertical dimensions are equal then no alignment of the images are necessary because the images are already aligned of an upper or lower edge.” Paper 05112005, pages 10-11.

In respectful disagreement with the Examiner, the Examiner’s remark that “no alignment is necessary” is wholly contradictory with the claimed invention, which

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specifically claims "if the vertical dimensions are identical, *performing vertical alignment* of an upper or lower edge of the regions of interest."

At Paragraph [0014] and at Figure 1, Applicant describes and illustrates the claimed invention having identical vertical dimensions requiring vertical alignment, which the Examiner has acknowledged is not taught in the cited art since the Examiner's understanding of the cited art is that "based with this knowledge, if the vertical dimensions are equal then *no alignment of the images are necessary* because the images are already aligned of an upper or lower edge." (Emphasis added).

Notwithstanding the Examiner's aforementioned comments, Applicant submits that Carrott is further deficient in curing the deficiencies of Karssemeijer since the claimed invention recites, inter alia, "... comparing *a vertical dimension of the region of interest on each image...*", and the Examiner has not stated with specificity where the combination of Karssemeijer and Carrott teaches the *comparing of a vertical dimension of the region of interest on each image*.

Regarding Claims 14-16 More Specifically

The Examiner alleges obviousness by referencing Carrott at Column 6 lines 57-58 and numeral 107 of Figure 5b, alleging that image 107 represents body part contours such as the outline of the breast. Paper 05112005, page 13.

In respectful disagreement with the Examiner, Applicant finds Carrott to be absent any such teaching, and submits that the Examiner has not stated with any degree of specificity where Carrott does provide such a teaching.

At column 8 lines 36-37, Applicant finds Carrott to teach a centered star-shaped template 107, and not body part contour 107 as alleged by the Examiner.

Accordingly, Applicant submits that Karssemeijer as modified by Carrott fails to teach or suggest each and every element of the claimed invention.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one

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skilled in the art to do what the patent Applicant has done, fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the forgoing, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) have been traversed, and respectfully request that the Examiner reconsider and withdraw these rejections.

Regarding New Claim 22

Applicant has added new Claim 22 that is dependent on Claim 5 and is directed to subject matter disclosed but unclaimed. No new matter has been added as antecedent support may be found in the application as originally filed such as at Paragraph [0018] for example. For at least the reasons set forth above regarding Claim 5, Applicant submits that Claim 22 is directed to allowable subject matter, and respectfully requests entry and notice of allowance thereof.

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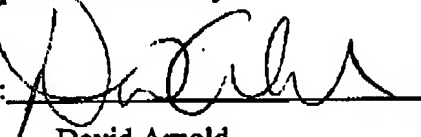
The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 50-2513.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above identified Deposit Account.

Respectfully submitted,

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